Furnace Pipes Are Hoisted With the Aid of a Boring (Cont.) 92-2-18/37

unit of the Baku Refinery im. Andreyev in June 1957. There is one drawing showing how the pipes are hoisted.

ASSOCIATION: Bakinskiy NPZ im. Andreyeva (Baku Refinery im. Andreyev)

AVAILABLE: Library of Congress

Card 2/2

FROLOV, M. S. and GONCHAROV, P. V.

"Practical Manual on the Tinplating and Soldering of Milk Containers," Moskva, Pishchepromizdat, 1955.

FROLOV, M.S.

Relationship between the shape of the light curve and the period of long-period Cepheids of the spheroidal concentration of the Galaxy. Astron.tsir. no.207:12 D '59. (MIRA 13:6)

1. Astronomicheskoye otdeleniye mekh.-mat.fakul'teta Moskovskogo gosudarstvennogo universiteta.
(Cepheids)

FROLOV, M.S.

Investigating the relationship between the shape of the brightness curve and the length of the period for Cepheids of the Galactic Spherical Component. Per.zvezdy 13 no.2:77-83 N '60.
(MIRA 14:10)

1. Gosudarstvennyy astronomicheskiy institut imeni P.K.Shternberga.
(Cepheids)

FROLOV, M.S.

Characteristics of extra-short period Cepheids. Astron.tsir. no.226:7-9 O '61. (MIRA 16:1)

1. Astronomicheskiy sovet AN SSSR.
(Cepheids)

FROLOV, M.S.

Difference of phases of chromospheric and photospheric pulsations of short-period Cepheids. Astron.tsir. no.232:20-22 D '62. (MIRA 16:4)

1. Astronomicheskiy sovet AN SSSR.
(Cepheids)

FROLOV, M.S.

Period-luminosity relation for short-period Cepheids. Astron.tsir. no.231: 18-20 N '62. (MIRA 16:4)

1. Astronomicheskiy sovet AN SSSR.
(Cepheids)

FROLOV, M. S.

Period-luminosity relation for short-period Cepheids. Astron. zhur. 40 no.1:115-117 J-F '63. (MIRA 16:1)

1. Astronomicheskiy sovet AN SSSR.

(Cepheids)

FROLOV, M.S.

Seminar on the investigation of pulsating and eclipsing variable stars. Astron.tsir. no.225:22-23 S '61. (MIRA 16:1)

1. Astronomicheskiy sovet AN SSSR.
(Stars, Variable)

FROLOV, M.S.

Wesselink's method and the luminosities of some short-period Cepheids. Astron. tsir. no.229:26-28 Je '62. (MIRA 16:6)

1. Astronomicheskiy sovet AN SSSR.
(Cepheids)

FROLOV, M.S.

Some peculiarities of ultrashorp-period Cepheids. Per.zvezdy 14 no.1:3-14 Ja '62. (MIRA 17:3)

1. Astronomicheskiy sovet AN SSSR.

YEFREMOV, Yu.N.; FROLOV, M.S.

Seminar on the investigation of pulsating and eclipsing variable stars. Per.zvezdy 14 no.1:66-68 Ja '62. (MIRA 17:3)

1. Astronomicheskiy sovet AN SSSR.

FROLOV, M.S.

Wesselink's method and absolute magnitudes of short-period Cepheids. Per. zvezdy 14 no.2:95-103 Je '62. (MIRA 17:2)

1. Astronomicheskiy sovet AN SSSR.

FROLOV, M.S.

Period-luminosity relation of short-period Cepheids. Astron. tsir. 274:2-4 D '63. (MIRA 18:10)

1. Astronomicheskiy sovet AN SSSR.

FROLOV, M.V.

ST-58 junction repeater. Avtom., telem. i sviaz' 4 no.1:40 Ja '60. (MIRA 13:4)

1. Inzhener lineyno-apparatnogo zala Shakhun'inskoy distantsii signalizatsii i svyazi Gor'kovskoy dorogi.
(Railroads--Communication systems)

L 07213-67 EWT(d)/EWP(c)/EWP(v)/EWP(k)/EWP(h)/EWP(l)

ACC NR: AP6028699 SOURCE CODE: UR/0410/66/000/003/0101/0112

AUTHOR: Luk'yanov, A. N. (Moscow); Frolov, M. V. (Moscow)

47
B

ORG: none

TITLE: Investigation of signals of the state of an operator

SOURCE: Avtometriya, no. 3, 1966, 101-112

TOPIC TAGS: man machine ~~relation~~ communication, statistic analysis, man operator, cybernetics

14

ABSTRACT: In order to raise the effectiveness of the operations of a man-machine system, the present authors propose a block diagram with control of the functional state of man-operator (Figs. 1 and 2). The α and η processes correlated, correspondingly, with the state of attention and the state of emotional stress, may be used in the control system of the functional states of man. Quantitative values of the coefficients of difference have been obtained for the processes α and η of the states of attention and emotional stress from the state of the "operative rest." On the basis of experimental data obtainted, the statistical problem of the detection of signals of emotional stress and the attention state of the operation is solved. Orig. art. has: 25 formulas, 1 table, and 7 figures. [26]

Card 1/2 UDC: 62—506.2

L 07213-67

ACC NR: AP6028699

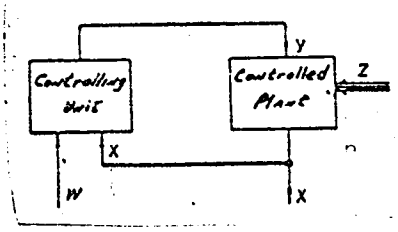

Fig. 1. Block diagram of man-operator system

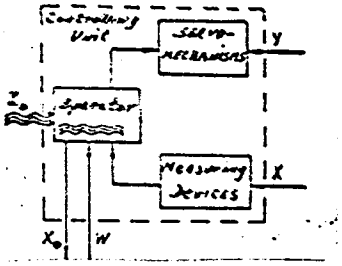

Fig. 2. Block diagram of man-operator system

SUB CODE: 05/06/ SUBM DATE: 14Oct65/ ORIG REF: 016/ OTH REF: 007

Card 2/2

ACC NR: AP7002683 SOURCE CODE: UR/0247/66/016/006/0974/0983

AUTHOR: Popov, V.A.; Simonov, P.V.; Tishchenko, A.G.; Frolov, M.V.; Khachatur'yants, L.S.

ORG: none

TITLE: Analysis of the intonational characteristics of speech as an index of emotional state in humans under spaceflight conditions

SOURCE: Zhurnal vysshey nervnoy deyatel'nosti, v. 16, no. 6, 1966, 974-983

TOPIC TAGS: manned space flight biotelemetry, bioastronautics, psychologic stress, speech analysis, emotional tension, emotion, space psychology, human engineering, speech spectrum

ABSTRACT: A method is described for analyzing the spectral characteristics of speech (frequency, intensity of articulatory components) which can serve as a reliable index of emotional state. Increased emotional tension is accompanied by increases in articulatory frequency F and signal intensity A, i.e., by an increase in the moment of articulation $M_F = A \cdot F$. Monitoring of sympathetic indices (pulse, respiration, etc.) concurrently with the parameter M_F provides a more reliable evaluation of operator state and permits differentiation of physical from emotional tension. Human

Card 1/3 UDC: 612.821

ACC NR: AP7002683

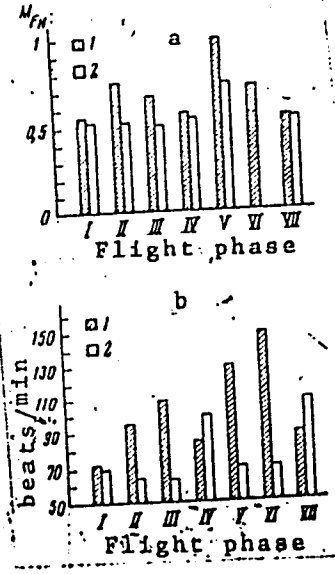

Fig. 1. Comparison of indices of emotional state (speech characteristic and pulse rate) of Leonov during spaceflight and preflight rehearsal

Card 2/3

ACC NR: AP7002683

emotions modeled by Stanislawski-method actors were used to check the speech intonation analysis method. Considerable changes in the actors' heart rhythms during these tests attest to the presence of genuine emotion. The method described was used for actual determination of A. A. Leonov's emotional state during his EVA on the Voskhod-2 flight. The cosmonaut's physical strain was successfully differentiated from emotional tension. A graph is given comparing results obtained for a) the speech characteristic M_F, and b) pulse rate at various stages of 1) actual flight, and 2) thermal pressure chamber rehearsals. Computer analysis will permit more exact correlation of the spectral characteristics of speech sounds with various degrees of positive and negative emotions.

SUB CODE: 06, 05/ SUBM DATE: 14Jun66/ ORIG REF: 007/ OTH REF: 004
ATD PRESS: 5113

Card 3/3

FROLOV, Mikhail Yermilovich; KUSHNAREV, B.P., red.

[Multiple-process automatic AG-18 unit for the electroplating of parts] Agregatnyi mnogoprotsessnyi avtomat dlia gal'vanicheskoi obrabotki detalei AG-18. Leningrad, 1964. 26 p. (MIRA 17:11)

FROLOV, N.

Plane table to determine the course and speed of an oncoming vessel. Mor. flot 16 no.10:14 O '56. (MLRA 9:11)

1. Starshiy prepodavatel' Odesskogo vysshego morekhodnogo uchilishcha.

(Nautical instruments)

FROLOV, N. (Zaporozh'ye)

Maintenance of fire engines and repair of car bodies. Pozh. delo 5 no.4:24 Ap '59. (MIRA 12:5)
(Fire engines--Maintenance and repair)

DEMIDOV, A., kandidat tekhnicheskikh nauk; LUTKIN, N., kandidat tekhnicheskikh nauk; DEMIN, G., kandidat tekhnicheskikh nauk; MALIS, A., kandidat tekhnicheskikh nauk; PETRENKO, A., inzhener; GERLAKH, L., inzhener; FROLOV, N., inzhener.

Mobile grain-drying unit. Muk.-elev.prom.22 no.12:3-5 D '56. (MLRA 10:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zerna i produktov ego pererabotki (for Demidov, Lutkin, Demin, Malis and Petrenko). 2. Altayskaya kontora Zagotzerno (for Gerlakn). 3. Tekhnicheskiy otdel Ministerstva khleboproduktov SSSR (for Frolov).

(Grain--Drying)

FROLOV, N.

Moving grain at grain reception points with a linear layout in areas where virgin lands are being put under cultivation. Muk.-elev. prom. 23 no.4:4-5 Ap '57. (MLRA 10:5)

1. Tekhnicheskiy otdel Ministerstva khleboproduktov SSSR.
(Grain handling)

KARABANOV, S., inzh.; FROLOV, N., inzh.

Device for the even loading of grain into railroad cars. Muk.-elev. prom. 24 no.1:5-8 Ja '58. (MIRA 11:2)

1. Tekhnicheskiy otdel Ministerstva khleboproduktov SSSR.
(Grain—Transportation)
(Loading and unloading)

NESTERUK, F., doktor tekhn. nauk; SEKTOROV, V., kand. tekhn. nauk; FROLOV, N., inzh.

"Origin and development of windmills" by N.A. Ponomarev. Reviewed by F. Nesteruk, V. Sektorov, N. Frolov. Muk.-elev. prom. 25 no.4:31-32 Ap '59. (MIRA 13:1)

1.Institut istorii yestestvoznaniya i tekhniki AN SSSR (for Nesteruk). 2.Institut nauchnoy informatsii AN SSSR (for Sektorov). 3.Proizvodstvenno-tekhnicheskoye upravleniye Gosudarstvennogo komiteta Soveta Ministrov SSSR po khleboproduktam (for Frolov).
(Windmills) (Ponomarev, N.A.)

FROLOV, N.

Operation of an apparatus for the magnetic treatment of feed water on ships of the Klaypeda harbor. Mor. flot 21 no. 6:20-22 Je '61. (MIRA 14:6)

1. Starshiy gruppovoy mekhanik Klyapedskogo portoflota.
(Memel--Feed water)

FROLOV, N.

The A-3 unit for mechanical coal mining. Bezop.truda v prom. 6 no.4:33 Ap '62. (MIRA 15:5)
(Coal mining machinery)

POCHEKUTOV, I.; FROLOV, N.

Useful seminar. Fin. SSSR 23 no.12:70-71 D '62.
(MIRA 16:1)

1. Nachal'nik otdela gosudarstvennykh dokhodov Krasnoyarskogo krayevogo finansovogo otdela (for Pochekutov).

(Krasnoyarsk Territory—Forestry schools and education)

A L 9658-66 EWT(d)/EWP(1)

ACC NR: AP6000259 SOURCE CODE: UR/0209/65/000/011/0076/0081

AUTHOR: Frolov, N. (Engineer, Lieutenant colonel)

ORG: None

TITLE: For high-quality repairs

SOURCE: Aviatsiya i kosmonavtika, no. 11, 1965, 76-81

TOPIC TAGS: industrial automation, aircraft maintenance, aircraft industry, aircraft engine, machine tool

ABSTRACT: The author discusses the achievements of several individual workers and crews in performing repairs and introducing advanced techniques in the repair shops of military aircraft industries. It is noted that although only a few cases were mentioned on the introduction of advanced technological processes, mechanization, and automation of repairs, they illustrate the fact that large numbers of workers, engineers, technicians, and officers of aviation repair enterprises together with the engineering repairs service of the Air Force have joined in the struggle for the further improvement in the military preparedness of the Air Force. The article notes contributions by workers in industrial engineering, machine tool, aircraft

Card 1/2

L 9658-66
ACC NR: AP6000259

engine assembly, and woodworking processes. It is noted that aircraft repair plants are not fully supplied by industry with the necessary spare parts and that the repair plants are forced to produce these spare parts in their own facilities. The production of spare parts, the machine tools used in certain enterprises, including the 2A450 and the 2430 machine tools, contributions to the improved design of aircraft engines, conveyers used in some operations, and other repair operations are discussed. Orig. art. has: 3 figures.

SUB CODE: 01, 13 / SUBM DATE: None

Card 2/2

L-57764-65 EWP(k)/EWT(m)/EWP(h)/EWP(t) Pf-4 JD

ACCESSION NR: AR5012859 UR/0276/65/000/004/B028/B028
621.9.047

SOURCE: Ref. zh. Tekhnologiya mashinostroyeniya. Svodnyy tom, Abs. 4B227

AUTHORS: Kondrat'yev. V. A.; Frolov, N. N.

TITLE: On the problem of determining the function t = f(a) for various forms of the electrical parameter stabilization in electrochemical working of metals

CITED SOURCE: Sb. Materialy Nauchno-tekhn. konferentsii Tul'sk. politekhn. in-ta 1964 g. Tula, 1964, 31-35

TOPIC TAGS: electrochemical process, metal removal

TRANSLATION: The derivation of formulas for determining the dependence of time t necessary for the removal of the desired thickness a at various rules for changing the voltage and current force is proposed. It was experimentally established that at various forms of stabilizing the electrical parameters of the process and at other factors influencing the progress of the process of electrochemical working being equal, various lengths of time t are necessary for the removal of a desired thickness a. Illustration 1; bibliography 2 entries. V. Pryanikova

SUB CODE: IE, MM ENCL: 00

Card 1/1

FROLOV, N.H

*Frolov, N. A. Teoriya funkcii deĭstvitel'nogo peremennogo. Theory of functions of a real variable.] Gosudarstv. Učebno-Pedagog. Izdat., Moscow, 1953. 164 pp. 3.60 rubles.

A textbook of introductory character. The chapter headings are: General theory of sets; The set of real numbers; The theory of point sets; Functions; Continuous curves; Measurement of sets; Riemann integral; Lebesque integral; Role of Soviet mathematicians in the development of the theory of functions of a real variable.

1 - E/M

FROLOV, Nikolay Andrianovich; IGNAT'YEVA,A.V., redaktor; MAKHOVA,N.N., tekhnicheskiy redaktor

[Differential and integral calculus; textbook for pedagogical institutes] Differentsial'noe i integral'noe ischislenie; uchebnoe posobie dlia pedagogicheskikh institutov. Moskva, Gos. uchebno-pedagog. izd-vo Ministerstva prosveshcheniia RSFSR, 1955. 339 p. (MLRA 9:4)
(Calculus, Differential) (Calculus, Integral)

FROLOV, Nikolay Adrianovich; VAYNBERG, M.M., prof., retsenzent; NEMTSOVA, L.G., red.; GOLOVKO, B.N., tekhn.red.

[Course of mathematical analysis] Kurs matematicheskogo analiza. Moskva, Gos.uchebno-pedagog.izd-vo M-va prosv. RSFSR. Pt.2. [Textbook for physicomathematical departments of pedagogical institutes] Posobie dlia fiziko-matematicheskikh fakul'tetov pedagogicheskikh institutov. 1959. 350 p. (MIRA 12:8)
(Mathematics--Study and teaching)

FROLOV, N.A., inzh.; REYNER, A.N., inzh.

Yachts made of mesh-reinforced concrete. Sudostroenie 27 no.10:44-47 O '61. (MIRA 14:12)
(Yacht-building)
(Reinforced concrete construction)

FROLOV, Nikolay Adrianovich; PONOMAREV, S.A., red.; MAKHOVA, N.N., tekhn. red.

[Theory of functions of real variables] Teoriia funktsii deistvitel'nogo peremennogo; uchebnoe posobie dlia pedagogicheskikh institutov. Izd. 2. Moskva, Gos. uchebno-pedagog. izd-vo M-va prosv. RSFSR, 1961. 171 p.
(MIRA 15:2)
(Functions of real variables)

FROLOV, N.A.

Approach tracks have been put into good order. Put' put.khoz. 8 no.2:30 '64. (MIRA 17:3)

1. Nachal'nik Mundybashskoy distantsii Zapadno-Sibirskoy dorogi.

ACCESSION NR: AR4027703 S/0276/64/000/002/G007/G008

SOURCE: RZh. Tekhnologiya mashinostroyeniya, Abs. 2G38

AUTHOR: Frolov, N. A.; Belinkiy, A. L.; Fedorov, V. K.; Istrina, Z. F.

TITLE: High-strength casting of new corrosion-resisting (stainless) steels with reduced nickel content

CITED SOURCE: Tr. Vses. n.-t. i konstrukt. in-t khim. mashinostr., vy*p. 43, 1963, 88-95

TOPIC TAGS: high-strength casting, corrosion-resisting steel, low nickel content, heat treatment, inter-crystal corrosion, steel, nickel steel

TRANSLATION: Steel Kh21N5TL has satisfactory casting properties enabling sufficiently complex castings of high strength to be produced. As a result of heat treatment, the yield point of this steel exceeds by 1.5--2 times that of type 18--8 chromium--nickel steels. Its resistance to corrosion in a number of media approaches that of Kh18N9TL steel. With a percentage ratio Ti:C $\geq$ 5 it is not prone to inter-crystal corrosion. Steel Kh17N4S2L has good casting

Card 1/2

ACCESSION NR: AR4027703

properties, considerably surpassing those of Kh18N9TL, and can be used to make particularly complex castings. Heat treatment of it insures a yield point 2--2.5 times higher than that of Kh18N9TL. Its resistance to corrosion is considerably lower than that of Kh21N5TL, hence castings from it can be used only for slightly aggressive media. Kh17N4DZL has better casting properties than Kh18N9TL and Kh21N5TL, but lower than Kh17N4S2D. Kh17N4M2L surpasses austenitic steels by more than double in hardness, is not prone to inter-crystal corrosion as determined by the AM method (GOST 6032-58), is resistant in a number of aggressive media and can be used to make equipment operating in sea water and certain acids, gas and oil wells and oil refineries.

DATE ACQ: 24Mar64 SUB CODE: ML ENCL: 00

Card 2/2

FROLOV, Nikolay Adrianovich; DOLGOPOLOV, V.G., red.

[Course in mathematical analysis; a textbook for pedagogical institutes] Kurs matematicheskogo analiza; posobie dlia pedagogicheskikh institutov. Izd. 2., perer. Moskva, Prosveshchenie. Pt.1. 1964. 383 p. (MIRA 17:5)

FROLOV, Nikolay Andrianovich; KRASNOV, M.L., red.

[Brief course in higher mathematics] Kratkii kurs vysshei matematiki. Moskva, Mosk. energeticheskii institut. Pt.1. 1962. 221 p. (MIRA 17:4)

ACCESSION NR: AR4018336 S/0137/64/000/001/I084/I084

SOURCE: RZh. Metallurgiya, Abs. 1I538

AUTHOR: Frolov, N. A.; Belinkiy, A. L.; Fedorov, V. K.; Istrina, Z. F.

TITLE: The properties of new foundry corrosion-resistant (stainless) steel, type Kh17M2TL and the area of its application in chemical machine building

CITED SOURCE: Tr. Vses. n.-i. i konstrukt. in-t khim. mashinostr., vy*p. 43, 84-87

TOPIC TAGS: stainless steel, stainless steel casting, chromium nickel steel, acid resistant steel, corrosion resistant steel

TRANSLATION: Steel has higher casting properties than Cr-Ni-steel of the austenitic class. Casting shrinkage determined on an instrument designed by Bol'shakov amounts to 2.12-2.21%. The flowability was determined according to a spiral probe (with a pouring temperature of 1,400 degrees the length of the spiral is equal to 300 mm; at 1,600 degrees, it is equal to 740 mm). The internal shrinkage blisters were studied on conical and cylindrical probes. In the former, a concentration of shrinkage blisters forms; in the latter, there is a large zone of shrinkage porosity, increasing as the temperature of pouring rises. Heat treatment (annealing at 760-

Card 1/2

ACCESSION NR: AR4018336

780 degrees for 2 hours) of steel does not influence its mechanical properties and should be conducted for the purpose of removing casting stresses and for averting propensity for intercrystalline corrosion. Steel has good corrosion resistance in 74% boiling acetic acid and at 78% thermic phosphuric acid at 100 degrees, and is recommended as a substitute for Cr-Ni-Steel type 18-8.

SUB CODE: MM ENCL: 00

Card 2/2

KOTLYAROV, Stepan Ivanovich; ZIMIN, Dmitriy Kondrat'yevich; FROLOV, Nikolay Afanas'yevich; ASSONOV, V.A., redaktor; KATSAUROV, I.N., redaktor; SHUSHKOVSKAYA, Ye.L., redaktor; ALADOVA, Ye.I., tekhnicheskiy redaktor.

[Problems in mining engineering, opening and supporting mine workings] Zadachnik po gornym rabotam, provedeniiu i kreplenilu gornykh vyrabotok. Moskva, Ugletekhizdat, 1955.261 p. (MLRA 9:5)
(Mining engineering)

FROLOV, N. A. Cand Tech Sci -- (diss) "Study of the Ventilation of Mines by the Method of Electrical Models." [redacted] Dnepropetrovsk, 1957. 16 pp 21 cm. (Min of Higher Education [redacted] Ukrainian SSR, Dnepropetrovsk Order of Labor Red Banner Mining Inst im Artem), 150 copies (KL, 25-57, 114)

ABRAMOV, Fedor Alekseyevich; FROLOV, Nikolay Afanas'yevich; GRISHAYENKO, M.I., otvetstvennyy redaktor; BEKKER, O.G., tekhnicheskiy redaktor; ALADOVA, Ye.I., tekhnicheskiy redaktor

[Electric model of mine ventilation networks] Elektricheskoe modelirovanie ventiliatsionnykh setei ugol'nykh shakht. [Moskva] Ugletekhizdat, 1957. 132 p. (MLRA 10:7)
(Mine ventilation--Electromechanical analogies)

FROLOV, N.A.

ABRAMOV, F.A., professor, doktor tekhnicheskikh nauk.; POLOL'SKIY, V.A., inzhener.; FROLOV, N.A., inzhener.

New method of calculating complex diagonal connections. Gor. zhur. no.2:40-44 F '57. (MLRA 10:4)

1. Dnepropetrovskiy gornyy institut.
(Mine ventilation)

FROLOV, N.A.

ABRAMOV, F.A., professor, doktor tekhnicheskikh nauk; FROLOV, N.A., gornyy inzhener.

Electric automatic device for the design (modelling) of mine ventilation systems. Ugol' 32 no.5:28-31 My '57. (MLRA 10:5)

1. Dnepropetrovskiy ordena Trudovogo Krasnogo Znameni gornyy institut imeni Artema.
(Mine ventilation) (Electromechanical analogies)

ABRAMOV, Fedor Alekseyevich; BOYKO, Vladimir Aleksandrovich; FROLOV, Nikolay Afanas'yevich; BAGRINOVSKIY, A.D., otv. red.; GRISHAYENKO, M.I., red. izd-va; PROZOROVSKAYA, V.L., tekhn. red.

[Model mine ventilation networks] Modelirovanie ventiliatsionnykh setei shakht. Moskva, Gos. nauchno-tekhn.izd-vo lit-ry po gornomu delu, 1961. 219 p. (MIRA 14:5)
(Mine ventilation--Electromechanical analogies)

MILETICH, A.F., kand.tekhn.nauk; FROLOV, N.A., kand.tekhn.nauk

Use of electric analogies for studying the effect of air leakage on the performance of fans. Ugol' Ukr. 5 no.3:22-24 Mr '61. (MIRA 14:3)

1. Dnepropetrovskiy gornyy institut.
(Mine ventilation--Electromechanical analogies)

MILETICH, Anton Fedorovich, kand. tekhn. nauk. Prinimal uchastiye FROLOV, N.A., kand. tekhn. nauk; NIKITIN, V.S., kand. tekhn. nauk, otv. red.; LUCHKO, V.S., red. izd-va; LOMILINA, L.N., tekhn.red.

[Air leaks in mines; calculation, regulation and control of leaks]Utechki vozdukha v shakhtakh; raschet, regulirovanie i bor'ba s utechkami. Moskva, Gosgortekhizdat, 1962. 130 p. (MIRA 15:9)

(Mine ventilation)

KOTLYAROV, Stepan Ivanovich; ZIMIN, Dmitrich Kondrat'yevich; FROLOV, Nikolay Afanas'yevich; CHERNEGOVA, E.N., red. izd-va; OVSEYENKO, V.G., tekhn. red.

[Problems on the mining operations of drifting and timbering] Zadachnik po gornym rabotam, provedeniiu i krepleniiu gornykh vyrabotok. Izd.2., perer. i dop. Moskva, Gosgortekhizdat, 1962. 311 p. (MIRA 15:9)
(Mining engineering) (Mine timbering)

PONOMAREV, Ye. M., gornyy inzh.; PERSKIS, G. S., gornyy inzh.;
FROLOV, N. A., gornyy inzh.

Creative link between science and industry. Ugol' Ukr. 7 no.4:
46 Ap '63. (MIRA 16:4)

(Coal mines and mining)

FROLOV, M. F.

Frolov, M. F. "Determination of the Constituents of Rock-Deposits by the Method of Oriented Cores Collected by a Core-Drill and a Lateral Ground-Sampler." Azerbaidzhanskoe Neftianoe Khoziaistvo, Baku, No. 4, 1940, p. 32-34.

FROLOV, NIKOLAY FEDOROVICH

FROLOV, Nikolay Fedorovich; FROLOV, Yevgeniy Fedorovich; PERSHINA, E.G., vedushchiy redaktor; SHIKIN, S.T., tekhnicheskiy redaktor;

[Geological observations and structures during the drilling of deflected wells) Geologicheskie nabliudeniia i postroeniia pri burenii iskrivlennykh skvazhin. Moskva, Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry, 1957. 183 p. (MLRA 10:4)
(Oil well drilling)

FROLOV, N.F., inzh.

Hydraulic valve unit for operating presses. Mashinostroitel' no.3:11 Mr '60. (MIRA 13:6)
(Oil hydraulic machinery)

FROLOV, N.F.

Devices for removing and conveying pressed damp billets.
Mashinostroitel' no.2/3:45-46 N-D '56. (MIRA 12:1)
(Conveying machinery)

FROLOV, N.F., inzh.

Automatic machine unit for molding abrasive sections. Mashinostroitel' no.10:10-11 O '59. (MIRA 13:2)
(Grinding wheels) (Molding machines)

FROLOV, N.F., inzhener.

Additions to plans for foundations laid on two intersecting planes. Sudostroenie 22 no.7:33 Jl '56. (MLRA 9:10)

(Shipbuilding)

FROLOV, N.P., inzhener.

Organization of planning of preliminary assembly shop sections.
Sudostroenie 23 no.7:38-39 Jl '57. (MLRA 10:8)
(Shipbuilding) (Industrial management)

LEONT'YEV, Valerian Markovich, inzh.; FROLOV, Nikolay Fedorovich, inzh.; RIMMER, A.I., inzh., retsenzent; FUKEL'MAN, V.L., inzh., retsenzent; KUZ'MENKO, V.K., dots., nauchnyy red.; STOLYARSKIY, L.L., inzh., nauchnyy red.; FRUMKIN, P.S., tekhn. red.

[Technology of shipbuilding and ship repairs] Tekhnologiia sudostroeniia i sudoremonta. Leningrad, Gos. soiuznoe izd-vo sudostroit. promyshl., 1961. 435 p. (MIRA 15:2)

1. Predmetnaya komissiya Nikolayevskogo sudostroitel'nogo tekhnikuma (for Fukel'man).
(Shipbuilding) (Ships--Maintenance and repair)

(N) L 1910-66 EWT(m)/EPF(c)/EWP(i)/EWA(d)/EWP(v)/EWP(j)/T/EWP(t)/EWP(k)/EWP(z)/
EWP(b)/EWA(c) IJP(c)
AM5023885 JD/WW/HM/HW/WB/DJ/BOOK EXPLOITATION UR/
RM 629.12.011.2

Leont'yev, Valerian Markovich; Frolov, Nikolay Fedorovich

Shipbuilding materials (Sudostroitel'nyye materialy) Leningrad. Izdvo "Sudostroyeniye," 1965. 186 p. illus., biblio. 4000 copies printed.

TOPIC TAGS: shipbuilding, shipbuilding materials, ferrous metal, nonferrous metal, wood, concrete, paint, lubricant, heat insulator

PURPOSE AND COVERAGE: This textbook is intended for students of Technical Schools dealing with shipbuilding. The book presents information about the composition, properties, and methods of testing ferrous and nonferrous metals and alloys used in shipbuilding.

TABLE OF CONTENTS:

Card 1/4

L 1910-66
AM5023885

PART I. Metallic Materials

Card 2/4

L 1910-66
AM5023885

12

Card 3/4

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513810005-8"

L 1910-66
AM5023885

aluminum alloys -- 179

Enclosure II. International system of units SI -- 183

References -- 186

SUB CODE: GO SUBMITTED: 25May65 NO REF SOV: 028

OTHER: 000

Card 4/4

YEFIMOV, F.T.; FROLOV, N.G.; MAKOVSKIY, G.M., inzh., red.; GORDEYEVA, L.P., tekhn. red.

[Metal shot and sand; production and use] Metallicheskie drob' i pesok; proizvodstvo i primenenie. Moskva, Mashgiz, 1963. 142 p. (MIRA 16:7)
(Shot) (Sand, Foundry)

ACCESSION NR: AP4009824 S/0135/64/000/001/0018/0020

AUTHOR: Nazarov, V. I. (Engineer); Frolov, N. G. (Engineer)

TITLE: Electron beam welding of a metal less than 0.5 mm thick

SOURCE: Svarochnoye proizvodstvo, no. 1, 1964, 18-20

TOPIC TAGS: electron beam welding, alloy welding, 1Kh18N9T steel, steel welding, titanium alloy, aluminum welding, copper welding, zirconium alloy, OT-4 titanium alloy, AD-1 aluminum, M2 copper

ABSTRACT: The formation of a weld by fusion welding is only possible when the initial gap and the initial displacement of the edges do not exceed a definite limit. The possibility of the gap being closed during welding depends on the thermal expansion of the edges and the change in their form during the fusion process. The admissible gap and displacement are related to the distance between clamps. In the present paper, the critical magnitudes of the gap, the displacement of the edges and the distance between clamps are determined for electron beam welding of sheets made of 1Kh18N9T steel, OT-4 titanium alloy, AD-1 aluminum, M2 copper and a zirconium alloy containing 1% Nb. The sheets were cut out with precision scissors to guarantee rectilinearity of the edges to the order of 0.01 mm. Some samples were welded as cut, some were cleaned with emery cloth and some were

Card 1/2

ACCESSION NR: AP4009824

ground. Just before welding, all the samples were degreased. The critical magnitudes were determined by joining the sheets in such a way that there was a linear change in the investigated value along the length of the sample. In all cases, the maximal value of the investigated magnitude at one end of the joint was greater than the critical magnitude, and the welding was carried out in the direction of decreasing magnitude. The authors conclude that: (1) the technological characteristics of electron beam welding make it possible to weld certain metals only 0.1 mm thick; (2) prerequisites for the quality welding of thin metals are careful preparation of the edges and the availability of special fixtures; (3) the strength of the weld in stainless steels is never less than 80% of the strength of the base material. "V. G. Kulakov and N. A. Vorontsov also took part in the work." Orig. art. has: 6 figures, 3 tables and 3 formulas.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00

SUB CODE: MM NO REF SOV: 008 OTHER: 000

Card 2/2

ACCESSION NR: AP4029384 S/0135/64/000/004/0016/0019

AUTHOR: Kulikov, F. R. (Engineer); Bulina, A. I. (Engineer); Frolov, N. G. (Engineer)

TITLE: Mechanized argon shielded arc spot welding of SN-2 stainless steel and OT-4 titanium alloy

SOURCE: Svarochnoye proizvodstvo, no. 4, 1964, 16-19

TOPIC TAGS: spot welding, SN 2 stainless steel, OT 4 titanium alloy, arc welding, argon arc welding

ABSTRACT: The authors developed a method and equipment for mechanized argon-shielded spot welding of stressed structures open on one side only. In this method the welding gun is pressed against the upper member of the joint with a controlled pressure of 20-200 kg, which ensures a close contact between the members and improves considerably the quality and reliability of the welded joints. The sizes and breaking loads for spot welds in thin (0.4-2.0 mm) sheets of SN-2 stainless steel and OT-4 titanium alloy are presented, with a layout of the welder and the control panel. The best results are obtained with welding under

Card 1/2

ACCESSION NR: AP4029384

rigid conditions, i.e., with high currents. Argon arc spot welding can be successfully used in various branches of the machine-building industry for joining thin sheets or thin sheets to thick sheets. Orig. art. has: 2 tables and 7 figures.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: MM

NO REF SOV: 000 OTHER: 000

Card 2/2

L 14513-66 EWT(m)/EWA(d)/EWP(v)/T/EWP(t)/EWP(k)/EWP(z)/EWP(b) MJW/JD/HM

ACC NR: AP6006182 SOURCE CODE: UR/0135/66/000/002/0021/0024

AUTHOR: Kulikov, F. R. (Engineer); Persidskiy, A. S. (Engineer); Frolov, N. G. (Engineer)

ORG: none

TITLE: Strength and ductility of VT14 and VT6S titanium-alloy joints obtained by automatic argon-shielded arc welding

SOURCE: Svarochnoye proizvodstvo, no. 2, 1966, 21-24

TOPIC TAGS: welding, arc welding, argon shielded arc, titanium, titanium alloy, alloy welding, alloy weld, weld property/VT14 alloy, VT6S alloy

ABSTRACT: Automatic argon-shielded arc welding of VT14 and VT6S titanium-alloy sections 2—18 mm thick has been studied in an attempt to obtain welds with a tensile strength of 115—120 kg/mm^2 at satisfactory ductility (bend angle of at least 35° and a notch toughness of at least 3.5—4.0 mkg/cm^2). It was found that in sections up to 6 mm thick the required mechanical properties can be obtained by using a filler wire of the Ti-4.5Al-4.5Nb-0.1Re system or a wire containing up to 3.0% Al. In sections over 6 mm thick, commercial low-alloy wires containing α-stabilizing elements yielded welds with a satisfactory ductility but a low strength, varying from 63.6 to 102.3 kg/mm^2. Wires with composition similar to that of the base metal or with a high content of β-stabilizing elements yielded welds with a considerably higher

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L 14513-66

ACC NR: AP6006182

strength but a low ductility. It is suggested that Ti-Al-V or Ti-Al-Mo-V alloy weldments over 6 mm thick be welded with fillers of the Ti-2.7Al-3.2 V system and used in the annealed condition, which would ensure a tensile strength of 80—85 kg/mm at a satisfactory ductility and toughness. With an electrode wire containing 4.5—5% aluminum and 4% vanadium, the strength of alloy welds in the annealed and aged condition can be increased to 100—110 kg/mm^2. This, however, requires the use of special electrode wires, which are now being developed. Orig. art. has: 4 figures and 3 tables.

[ND]

SUB CODE: 11, 13/ SUBM DATE: none/ ATD PRESS: 4198

Card 2/2

SOV-117-58-10-20/35

AUTHORS: Prolov , N.I., Zeleneyev, V.A., Engineer

TITLE: Grinding of Non-Ferrous Metal Alloys (Shlifovaniye tsvetnykh splavov)

PERIODICAL: Mashinostroitel', 1958, Nr 10, pp 26-27 (USSR)

ABSTRACT: Investigations were carried out on the grinding processes of parts of non-ferrous alloys, in order to have relevant manual operations changed over to machine-grinding on circular, plain and centerless grinding machines. With respect to material, quality and performances of the polishing disks, the types KCh of black carborundum and E of normal electrocondum grains were found to be the best. The former are recommended for grinding of L62 brass, the latter for LS59-1 bronze and brass. Soft disks yielded the best results with all parts of non-ferrous alloys. For grinding of L68 and L62 brass, disks of M2 and SM1 hardness should be used; for bronze and L59-1 brass, disks of SM1 and SM2 hardness. Tolerances occurring in practical grinding of non-ferrous alloys

Card 1/2

are given in table 1, the permissible cutting depth in table 2. Rotation speed of the polishing disk is 28 to 30 m per second in all cases. Additional information is given on grinding of diverse shapes and parts of non-ferrous alloys other than bronze and brass. There are 2 tables and 1 diagram.

1. Alloys--Machining 2. Grinders--Performance

VOROB'YEV, A.I.; FROLOV, N.I.

Universal four-cutter heads for lathes. Mashinostroitel' no.1:36-37 Ja '59. (MIRA 12:2)
(Lathes--Attachments)

24 (4)

AUTHORS: Volkov, V. I., Engineer, Frolov, N. I., Engineer SOV/119-59-4-9/18

TITLE: A Device for the Measurement of Eccentric Parts (Ustanovka dlya izmereniya ekstsentrikov)

PERIODICAL: Priborostroyeniye, 1959, Nr 4, p 20 (USSR)

ABSTRACT: This device is intended for the measurement of the radius vectors of eccentric parts and consists of an optical dividing head and of a vertical comparator, which are both mounted on a cast iron base plate. By means of the dividing part the eccentric part under investigation can be adjusted to a given angle with an accuracy better than 1'. The vertical comparator can then be used for the measurement of the length of the radius vectors of the eccenter with an accuracy of 0.001 mm. The zero adjustment of the device must be checked previous to use. The procedure followed in the measurement is outlined step by step. If this instrument is introduced into the machine shop, the control by the central works laboratory becomes superfluous. There is 1 figure.

Card 1/1

FROLOV, N.I.; VARLAMOV, G.T.; PISHEK, Ya.

Practice of using a ZIF-650A rig to drill deep holes. Razved. i okh. nedr 29 no.7:56-58 Jl '63. (MIRA 16:9)

1. Gosudarstvennyy geologicheskiy komitet SSSR (for Frolov, Varlamov).
2. Cheskoye narodnoye predpriyatiye "Geologicheskaya razvedka" (for Pishek).

(Boring machinery)

AUTHORS: Budnikov, Yu.N., Frolov, N.I. 119-58-4-10/15

TITLE: A Device for Detecting a Short Circuit Between Winding Turns in Fractional-HP Motors (Pribor dlya obnaruzheniya mezhvitkovykh zamykaniy obmotok malogabaritnykh elektricheskikh dvigateley)

PERIODICAL: Priborostroyeniye, 1958, Nr 4, pp. 22-23 (USSR)

ABSTRACT: This device works with a phase-sensitive differential rectifier and with an ordinary device fitted with an indicator hand. It permits measuring the voltage in the short-circuited winding if the winding is located in an alternating field with increased frequency. The individual parts of the device are described without any more detailed values being given. The wiring circuit in principle of the indicator device and the photograph of the holding device for the motor part to be investigated are shown. There are 4 figures.

Card 1/1

FROLOV, N.I.

BUKOV, V.A., BYKOV, L.A., VALUK, V.A., VARTBARONOV, R.A., ZHILIS, E.F., KONDRAKOV, V.M., KUZ'MIN, V.A., SYCHEV, G.I. FROLOV, N.I., FOKIN, A.S., KHARINSKIY, A.N. (Saratov)

New method for producing stable neurogenic hypertension in dogs [with summary in English]. Arkh.pat. 20 no.5:21-27 '58 (MIRA 11:6)
(HEART, anatomy and histology,
thebesian vessels, review (Rus))

L 14399-65 EWG(j)/EWG(r)/EWT(l)/FS(v)-3/EWG(v)/EWG(a)/EWG(c) Pe-5 AEDC(a)/
AFWL/SSD/AFETR/AFTC(a) DD/ENS/RD
ACCESSION NR: AP4046784 S/0293/64/002/005/0805/0811

AUTHOR: Gozulov, S. A.; Mirolyubov, G. P.; Popov, N. N.; Frolov, N. I.

TITLE: Experimental investigation of the influence of impacts on the organism

SOURCE: Kosmicheskiye issledovaniya, v. 2, no. 5, 1964, 805-811

TOPIC TAGS: rat, dog, impact, simulation test, reentry

ABSTRACT: Rats and dogs were exposed to impacts ranging from 4 to 13.6 m/sec and with load magnitudes of from 800—900 units and durations of 10 to 1 msec. Experiments took place on an impact stand where animals were fixed in place to receive spine-to-chest forces. In all, 169 experiments were conducted on 100 rats and 69 dogs. In addition, animals were exposed to repeated impact in 40 tests. Electrocardiograms and respiration rate were registered from both rats and dogs. In addition, arterial pressure was recorded from dogs using electromagnetic or piezoelectric pickups. Results of the investigations

Card 1/3

showed that variations in the pulse rate in rats depended upon the magnitude of impact. Comparatively small impacts produced an increase (43% above normal) or decrease (57%) in the pulse rate. Following large impacts there was a 50% decrease in the pulse rate. In the majority of cases, when impact produced a decreased pulse rate, there was also injury to internal organs. Of 100 rats, 82 exhibited injury to one or more organs, while 18 showed only slight damage, characterized by subcutaneous or intramuscular hemorrhaging. The lungs appeared to be the organs most susceptible to impact. In dogs there was a decrease in the pulse rate (40—60%) for 10—30 sec following impacts greater than 200 units. During the first minute following impact, decreased arterial pressure ranged from 30—20 mm Hg. As in rats, there was a deepening of the S spike and an increase in the T spike with a general background of tachycardia. In all experiments dogs were exposed to speeds of 13—13.6 m/sec with impacts of 80—870 units. Impacts of 200 units (55 experiments) brought on maximum increases in heart and respiration rates during the first 10—15 sec after landing. To study the cumulative effects of impact, rats and dogs were exposed to repeated impacts. In rats exposed to three impacts of 300—350 units (10 minute intervals) there was a particularly

L 14399-65
ACCESSION NR: AP4046784

significant disruption of cardiac rhythm (extrasystole and atrioventricular blockage). In general, repeated impact tended to intensify functional disruption. Dogs exposed to 4—5 impacts (in the 200-unit range) with durations of 10—15 msec and intervals between impacts of 2.5 days did not show this increased disruption of physiological functions, possibly because of the greater interval between impacts. As in rats, the lungs of the dogs were the organs most susceptible to damage as a result of large impacts. The material indicates that the response to impact is complex and that more detailed studies of its physiological effects should be made. Orig. art. has: 2 tables and 4 figures.

ASSOCIATION: none

SUBMITTED: 03Feb64 ENCL: 00 SUB CODE: LS, PH

NO REF SOV: 003 OTHER: 008 ATD PRESS: 3136

Card 3/3

ACC NR: AT6036533 SOURCE CODE: UR/0000/66/000/000/0124/0126

AUTHOR: Gozulov, S. A.; Frolov, N. I.

ORG: none

TITLE: Problem of evaluating human muscular work capacity following impact accelerations /Paper presented at the Conference on Problems of Space Medicine held in Moscow from 24 to 27 May 1966./

SOURCE: Konferentsiya po problemam kosmicheskoy meditsiny, 1966. Problemy kosmicheskoy meditsiny. (Problems of space medicine); materialy konferentsii, Moscow, 1966, 124-126

TOPIC TAGS: space physiology, human physiology, space medicine, impact acceleration, biologic acceleration effect

ABSTRACT: Determining physiologically permissible tolerance limits of impact accelerations is difficult because of the brief duration of the stress. Also, it is impossible to interrupt or diminish the action of mechanical forces during an experiment. In this study, the static and dynamic work capacity of human subjects was investigated following their exposure to various magnitudes of accelerations.

Card 1/3

The study showed that in repeated experiments, dynamic and static work capacity underwent a sequence of changes which could be qualitatively and quantitatively evaluated. Qualitatively, indices of work capacity such as strength, resistance to fatigue, fatigability, and static work capacity generally showed an increase. As acceleration was increased, discoordination resulted which was manifested by the fact that some indices deteriorated while others were maintained or improved. Thus, while muscular strength was maintained at its original level, resistance to fatigue diminished, or strength diminished while resistance to fatigue and fatigability were unchanged, etc. Otherwise, work capacity was maintained as if there were functional redistribution or reciprocal compensation. A further increase in acceleration led to the diminution of all previously mentioned work capacity indices.

Quantitative changes in work-capacity indices were marked by disparities before and after exposure in that test values were higher before exposure than after. These changes had variable trend characteristics with a tendency towards improvement. As tests were repeated, the disparity in work-capacity indices decreased. Here, the trend was towards lowered work capacity. Therefore, muscular work capacity as a function of exposure to repeated impact accelerations which increased in magnitude went

ACC NR: AT6036533

through three stages:

1. an improvement in work capacity
2. discoordination stage
3. lowered work-capacity stage

Lowered work-capacity indices were noted on a fairly small scale, but during high accelerations, decreased work capacity was observed in the majority of subjects and was a precursor of possibly more serious and rapidly developing work-capacity disorders. Since the organism, the process of accommodating a constantly increasing stressor, selects functional reserves below its tolerance limit, decompensation to a certain extent results. This is reflected in lowered strength and resistance to fatigue, increased fatigability, and diminished static endurance. These stages of work-capacity changes have practical application where there is high individual disparity in tolerance to impacts. Therefore, by considering the developmental sequence of changes, a more accurate detection of the onset of depression is possible and the functional tolerance limit located in a zone of stable work capacity can be determined. [W. A. No. 22; ATD Report 66-116]

SUB CODE: 06 / SUBM DATE: 00May66

Card 3/3

ACC NR: AT6036654 SOURCE CODE: UR/0000/66/000/000/0280/0282

AUTHOR: Mirolyubov, G. P.; Frolov, N. I.; Morozova, N. P.

ORG: none

TITLE: Some characteristics of the effect of landing impact accelerations on the organism /Paper presented at the Conference on Problems of Space Medicine held in Moscow from 24-27 May 1966/

SOURCE: Konferentsiya po problemam kosmicheskoy meditsiny, 1966. Problemy kosmicheskoy meditsiny. (Problems of space medicine); materialy konferentsii, Moscow, 1966, 280-282

TOPIC TAGS: space physiology, impact acceleration, biologic acceleration effect, injury

ABSTRACT: In experiments conducted on 250 white rats and 20 dogs, selective injuries have been observed in parenchymatous and hollow organs. From the type of injuries sustained by hollow structures, it was concluded that the destructive force was directed from inside the organ. Ruptures of the vena cava and intestine were accompanied by hemorrhages in gastric mucosa, injury to the endocardium, and rupture of the interatrial septum. Injuries to parenchymatous organs were external in nature and surface hemorrhaging on the liver, subcapsulated fissures, and surface ruptures were noted.

Tolerance of landing accelerations depends to a considerable degree

Card 1/3

on the superimposition of additional accelerations which develop during vibration of a falling platform and its supporting chair during impact. Formerly, these effects of supplementary accelerations were extremely injurious. Animals are killed at landing rates of 6 m/sec. After elimination of supplementary accelerations, they can withstand an impact of 14 m/sec without injury.

Changes in arterial pressure, pulse, respiration rate, and EKG disorders occurring during landing impact accelerations are frequently observed when internal organs are injured. In isolated cases, injury to internal organs is observed in the absence of any cardiovascular or respiratory disorder. The range of accelerations which disrupt cardiovascular and respiratory function and cause injury to internal organs is more clearly demonstrated during transverse accelerations. Apparently, this range depends on the body surface sustaining the impact and the receptor zones involved and on the compensatory capacities of the organism. Expanding the methods for studying these phenomena will permit a more accurate determination of the range of accelerations which cause functional disorders only.

The effects of repeated impact accelerations which do not cause injury

ACC NR: AT6036654

are marked by a deterioration in tolerance reflected in cardiovascular and respiratory disorders (apnea, extrasystole, etc.). Injury to internal organs also occurs during repeated exposure to these accelerations. The summary effect of impact accelerations depends on the intensity of exposure as well as on the extent of the disruption in systems regulating the function of the organism and the antagonism of a number of complex compensatory mechanisms. When intervals between exposures are increased and the acceleration magnitude is decreased, a summary effect does not occur. This is probably due to the complete recovery of regulatory mechanisms during the interval between exposures. A study of the complex mechanisms of regulation and the compensatory reactions of the organism, as well as determining the time necessary for recovery after exposure to repeated accelerations will permit a far more accurate assessment of the problem of establishing permissible human limits. [W.A. No. 22; ATD Report 66-116]

SUB CODE: 06 / SUBM DATE: 00May66

Card 3/3

L 08342-67 EWT(1) SCTB DD/GD

ACC NR: AT6036678 SOURCE CODE: UR/0000/66/000/000/0374/0375

AUTHOR: Frolov, N. I.; Mirolyubov, G. P.

30

ORG: none

TITLE: Changes in the speed of response reactions after exposure to impact accelerations [Paper presented at Conference on Problems of Space Medicine held in Moscow 24-27 May 1966]

SOURCE: Konferentsiya po problemam kosmicheskoy meditsiny, 1966. Problemy kosmicheskoy meditsiny. (Problems of space medicine); materialy konferentsii, Moscow, 1966, 374-375

TOPIC TAGS: space medicine, space physiology, impact acceleration, biologic acceleration effect, central nervous system

ABSTRACT: The authors have shown that the rate of response is an index of human work capacity during rotation on a centrifuge, catapulting, or postflight fatigue. This index is important in emergency situations such as abandonment of a high-speed aircraft, which involves exposure to severe impacts.

To evaluate physiological tolerance of impacts of various magnitudes, the latent period of a simple motor reaction to light stimulus using 20 subjects in 177 tests was studied. The tests showed that the latent period according to EMG's fluctuated within 0.12 and 0.2 sec. Control measurements taken from the same subject (conducted at the same time as experimental measurements) showed a small deviation of ±0.01 sec. After the

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ACC NR: AT6036678

test, the latent period equalled 0.12—0.28 sec. The quality of the reaction depended on accceleration magnitude.

After exposure to low accelerations, the latent period duration generally decreased. An increase in acceleration to medium values caused reaction instability characterized by a shortening, prolongation, or no change in latent period.

After exposure to high accelerations, the latent period increased. This apparently indicates the predominance of inhibitory processes which reflect a protective reaction by the CNS to high accelerations.

Quantitative changes in the latent period were computed as a function of the difference in reaction duration before and after the test. The difference fluctuated within the limits of ±0.01—0.08 sec. After the repeated exposure of the same subject to experimental conclusions, it decreased somewhat in spite of increased acceleration.

Thus, in repeated tests with impacts, some adaptation was noted as reflected in a decrease in latent period shifts. Otherwise, changes in the quality of reaction were noted and were primarily characterized by a shortening of the latent period during low acceleration magnitudes and prolongation during higher values. The changes indicate a parabiotic reaction and are a nonspecific response of the organism to increasing stresses. [W.A. No. 22; ATD Report 66-116]

SUB CODE: 06 / SUBM DATE: 00May66

Card 2/2

FROLOV, N.I.

NIKOLAYEV, M.D.; FROLOV, N.I.

Using glass fibers in manufacturing instrument parts. Priborostroenie no.5:15-17 My '57. (MLRA 10:6)

(Glass fibers)

FROLOV, N.M.; Prinimal uchastiye: SEDOV, N.V.

Experimental determination of the effect of gravitational convection and drive pipes on the natural temperature distribution in drill holes. Dokl. AN SSSR 150 no.2: 301-304 My '63. (MIRA 16:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidrogeologii i inzhenernoy geologii. Predstavleno akademikom I.I.Sedovym. (Wells)

FROLOV, N. M., Cand Geol-Min Sci -- (diss) "Hydrogeological and hydrogeothermal conditions in the western part of the Black Sea region artesian basin." Moscow, 1960. 23 pp; 1 page of tables; (Moscow Order of Lenin and Order of Labor Red Banner State Univ im M. V. Lomonosov, Geology Faculty); 110 copies; price not given; list of author's works on pp 22-23 (14 entries); (KL, 17-60, 145)

FROLOV, N.M.

Temperature conditions of the "heliothermozone" as revealed by the southwestern area of the U.S.S.R. Trudy Lab.gidrogeil.probl. 45: 67-80. (MIRA 15:6)

(Solar radiation) (Earth temperature)

FROLOV, N.M.; MAKARENKO, F.A., doktor geol.-mineral.nauk, otv.red.; STOLYAROV, A.G., red.izd-va; ROMANOV, G.N., tekhn.red.

[Underground waters in the western part of the Black Sea artesian basin; conditions of distribution, utilization, paleohydrogeology, and geothermy] Podzemnye vody zapadnoi chasti Prichernomorskogo artezianskogo basseina. Moskva, Izd-vo Akad.nauk SSSR, 1961. 113 p. (Akademia nauk SSSR. Laboratoriia gidrogeologicheskikh problem. Trudy, vol. 38). (MIRA 15:3)
(Black Sea region--Water, Underground)

AL'TOVSKIY, M. Ye.; GOLEVA, G.A.; KRAYNOV, S.R.; SLAVYANOVA, L.V.; TOKAREV, A.N.; FROLOV, N.M.; SHVETS, V.M.

Development of V.I.Vernadskii's concept in present-day hydrogeology. Trudy VSEGINGEO no.9:5-20 '64. (MIRA 17:10)

FROLOV, N.M.

Effect of solar radiation on the temperature of the earth's crust. Dokl. AN SSSR 143 no.4:935-938 Ap '62. (MIRA 15:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidrogeologii i inzhenernoy geologii. Predstavleno akademikom N.M.Strakhovym.
(Solar radiation) (Earth temperature)

FROLOV, N.M.; YAZVIN, L.S.

Problems of prospecting for thermal waters. Sov. geol. 8 no.5:90-100 My '65. (MIRA 18:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidrogeologii i inzhenernoy geologii.